

AIAA SPACE 2017 Abstract

NASA's CubeQuest Challenge – From Ground Tournaments to Lunar and Deep Space Derby.

The First Flight of NASA's Space Launch System will feature 13 CubeSats that will launch into cis-lunar space. Three of these CubeSats are winners of the CubeQuest Challenge, part of NASA's Space Technology Mission Directorate (STMD) Centennial Challenge Program. In order to qualify for launch on EM-1, the winning teams needed to win a series of Ground Tournaments, periodically held since 2015. The final Ground Tournament, GT-4, was held in May 2017, and resulted in the Top 3 selection for the EM-1 launch opportunity. The Challenge now proceeds to the in-space Derbies, where teams must build and test their spacecraft before launch on EM-1. Once in space, they will compete for a variety of Communications and Propulsion-based challenges. This is the first Centennial Challenge to compete in space and is a springboard for future in-space Challenges. In addition, the technologies gained from this challenge will also propel development of deep space CubeSats.